

U.S.S.N 09/834,700
BRAUN
PRELIMINARY AMENDMENT AND RCE

AMENDMENTS TO THE CLAIMS

Claims 1-8, 11, 13-20, 44-53, 69-71 and 75 are pending in the application. Claim 12 is cancelled without prejudice or disclaimer herein. Claims 11, 13-15, 44 and 75 are amended herein. This listing of claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Original) An isolated nucleic acid molecule, comprising a sequence of nucleotides that encodes a polypeptide as set forth in SEQ ID No. 2, except that the Ile residue at position 646 of SEQ ID NO: 2 is replaced with Val, Leu or Phe.
2. (Original) An isolated nucleic acid molecule of claim 1, wherein the residue at position 646 of SEQ ID NO: 2 is Val.
3. (Previously presented) An isolated nucleic acid molecule of claim 1, comprising the sequence of nucleotides set forth as position 138 to position 2126 of SEQ ID NO: 1, except that the nucleotide at position 2073 of SEQ ID NO: 1 is replaced with a nucleotide selected from the group consisting of G, T and C.
4. (Original) The nucleic acid molecule of claim 3, wherein the nucleotide at position 2073 of SEQ ID NO: 1 is G.
5. (Original) The isolated nucleic acid molecule of claim 2, comprising nucleotides from position 138 to position 2126 of SEQ ID NO: 3.
6. (Previously presented) An isolated nucleic acid molecule, comprising at least 16 contiguous nucleotides of SEQ. ID. NO: 3; wherein the contiguous nucleotides include a sequence of 5 contiguous nucleotides as set forth from position 2069 to position 2077 of SEQ. ID. NO: 3.
7. (Original) The isolated nucleic acid molecule of claim 6, comprising at least 30 contiguous nucleotides of SEQ. ID. NO: 3.
8. (Original) The isolated nucleic acid molecule of claim 6, comprising at least 50 contiguous nucleotides of SEQ. ID. NO: 3.

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Claims 9 and 10 (cancelled)

11. (Currently Amended) A primer, probe or antisense nucleic acid molecule, comprising a sequence of at least 16 nucleotides that ~~specifically~~ hybridizes under high stringency conditions ~~corresponding to 0.1 x SSPE, 0.1% SDS, at 65°C~~ adjacent to, or at a polymorphic region spanning, a position corresponding to position 2073 of SEQ ID No. 1 or SEQ ID No. 3, or the complement thereof, wherein high stringency conditions correspond to and include a wash step in 0.1 x SSPE, 0.1% SDS, at 65°C thereof, of an AKAP10 allele.

12. (Cancelled)

13. (Currently Amended) A primer of claim 11, further comprising a free hydroxyl for enzymatic extension, wherein the primer that specifically hybridizes at a position immediately adjacent to a position corresponding to position 2073 of SEQ ID NO: 1 or 3, or the complement thereof. ~~3 of an AKAP10 allele.~~

14. (Currently Amended) A primer of claim 11, further comprising a free hydroxyl for enzymatic extension, wherein the primer that is extended by a nucleotide that specifically base pairs with the nucleotide at a position corresponding to position 2073 of SEQ ID NO: 3 or the complement thereof. ~~3 of an AKAP10 allele.~~

15. (Currently Amended) The primer, probe or antisense nucleic acid molecule of claim 11, that is single-stranded, ~~single stranded and contains at least 16 contiguous nucleotides of the AKAP10 allele or complement thereof,~~ wherein the sequence of nucleotides includes at least 5 contiguous nucleotides from position 2069 to position 2077 of SEQ. ID. NO: 3.

16. (Original) The primer, probe or antisense nucleic acid molecule of claim 15, wherein nucleotide at position 2073 of SEQ ID NO: 1 is replaced with a nucleotide selected from the group consisting of G, C or T.

17. (Original) The isolated nucleic acid molecule of claim 11, comprising at least 20 contiguous nucleotides of SEQ. ID. NO: 3, or the complement thereof.

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18. (Original) The isolated nucleic acid of claim 11, comprising at least 30 contiguous nucleotides of SEQ. ID. NO: 3, or the complement thereof.

19. (Original) A nucleic acid vector, comprising the nucleic acid molecule of claim 1.

20. (Original) A cell containing the nucleic acid vector of claim 19.

Claims 21-43 (Cancelled).

44. (Currently Amended) A cell, comprising heterologous nucleic acid that encodes a human AKAP10 variant protein or portion thereof that exhibits a biological activity of the full length variant protein, wherein:

the AKAP10 variant protein or portion thereof comprises a polymorphism that results in a valine at a position corresponding to the position of amino acid residue 646 of SEQ ID NO: 2.

45. (Original) The cell of claim 44, wherein heterologous nucleic acid encodes the sequence of amino acids set forth in SEQ. ID. NO: 4.

46. (Original) The cell of claim 44, wherein the nucleic acid comprises the sequence of nucleotides set forth from position 138 to position 2126 of SEQ. ID. NO: 3.

47. (Previously presented) A kit, comprising:
a first primer or probe of claim 11; and
a second primer or probe that specifically hybridizes adjacent to or at a polymorphic region spanning a position corresponding to positions selected from the group consisting of position 83587 of SEQ ID NO 13 or 17, position 129600 of SEQ ID NO 14 or 17, and position 156,277 of SEQ ID NO 18 or 17 of an AKAP10 allele or the complement thereof.

48. (Original) The kit of claim 47, further comprising instructions for use.

49. (Original) The kit of claim 47, further comprising at least one dideoxynucleotide.

50. (Original) The kit of claim 49, wherein the dideoxynucleotide is selected from the group consisting of ddA, ddC and ddG.

51. (Currently Amended) A method of producing a protein, comprising:
~~by~~

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growing the cell of claim 20 under conditions whereby the protein encoded by the vector is expressed; and
isolating the protein.

52. (Original) The method of claim 51, wherein the cell is a mammalian cell, yeast cell, insect cell or bacterial cell.

53. (Original) The method of claim 51, wherein the cell is a human cell.
Claims 54-68 (cancelled).

69. (Previously presented) A solid support, comprising a nucleic acid of at least 16 nucleotides comprising a polymorphic region of an AKAP10 gene, wherein the polymorphic region comprises a nucleotide at a position corresponding to position 2073 of SEQ ID NO: 1 that is other than an A or other than T on the complementary strand.

70. (Original) The solid support of claim 69 which is a microarray.

71. (Previously presented) The microarray of claim 70, further comprising a nucleic acid molecule that comprises the sequence of a polymorphic region of an AKAP10 gene corresponding to a position selected from the group consisting of position 83587 of SEQ ID NO: 13, position 129,600 of SEQ ID NO: 14 and position 156,277 of SEQ ID NO: 18.

Claims 72-74 (cancelled).

75. (Currently amended) A primer ~~consisting essentially of~~ comprising, a sequence of nucleotides ~~nucleotide sequences~~ selected from the group consisting of SEQ ID NO: 8, SEQ ID NO: 15, SEQ ID NO: 19 and SEQ ID NO: 20, wherein the primer has a free hydroxyl for enzymatic extension through a polymorphic region of an AKAP10 gene corresponding to a position selected from the group consisting of position 2073 of SEQ ID NO: 1, position 83587 of SEQ ID NO: 13 or SEQ ID NO: 17, position 129600 of SEQ ID NO: 14 or SEQ ID NO: 17 and position 156,277 of SEQ ID NO: 17 or SEQ ID NO: 18.